APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,692	07/25/2001	Yoshihito Nakagawa	16869S-029800US	7615

			EXAMINER
20350	7590	05/04/2005	DUONG, OANH L

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ART UNIT	PAPER NUMBER
2155	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/915,692	NAKAGAWA ET AL.
	Examiner	Art Unit
	Oanh L. Duong	2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>03</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 October 2004*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

DETAILED ACTION

Claims 1-17 are presented for examination.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1.   Claims 1-5 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by

Bachmat et al. (Bachmat) (US 6,711,649 B1).

Regarding claim 1, Bachmat teaches a system comprising:

a plurality of host computers (col. 5 line 51);

an accounting server (i.e., system manager 40, Fig. 3) in data communication

with said host computers (col. 5 lines 52-63);

storage control device (i.e. device controller 34A, Fig. 3) having a plurality of

channel ports for receiving data input/output operations from said host computers, said

storage control devices in data communication with said accounting server (col. 5 lines 52-63);

storage devices (i.e., physical disk storage devices 31A-31E, Fig. 3) operative with said storage control device to store data received from said host computers and to retrieve data for transmission to said host computer (col. 5 lines 1-13 and col. 6 lines 45-50)

accounting data generating means for generating accounting data based on at least a number of times of access (col. 8 lines 32-36 and col. 23 lines 38-41) or a data transfer quantity for each of one or more accounting subject control units (col. 15 lines 53-55); and

transfer means for informing said accounting server of said accounting data generated by said accounting data generating means (col. 6 lines 45-56).

wherein for each said accounting subject control unit, accounting data is generated using metered accounting or fixed accounting, depending on whether an upper limit is defined for either a number of accesses per unit time or a quantity of data transferred per unit of time (i.e., defining the length of an analysis interval and generating, for each subinterval, operational data including the number of accesses to each logical volume on predetermined ones of physical disk storage devices in response to data transfer request, col. 4 lines 3-8, col. 6 lines 45-56, col. 8 lines 32-39 and col. 9 lines 1-12).

Regarding claim 2, Bachmat ab accounting subject control units is one of a host computer, a World Wide Name, a channel port, a storage device, or an in-storage-device area (col. 5 lines 3-17).

Regarding claim 3, Bachmat teaches said storage control device is associated with a service processor and includes transfer means for informing said service processor of said accounting data (col. 5 lines 52-67 and col. 6 lines 45-56).

Regarding claim 4, Bachmat teaches: means for setting said upper limit value of said accounting data in said accounting subject control units (col. 9 lines 7-12), said means being made to operate from at least one of said accounting server or said service processor (col. 5 lines 57-60).

Regarding claim 5, Bachmat teaches said upper limit value is determined on the basis of a predetermined period which includes, as a unit, at least one of a day, a week, a month, or a year (col. 13 lines 66-67).

Regarding claim 10, Bachmat teaches a connection between said storage control device and said host computers is made through serial channels of optical fibers so as to constitute a LAN (col. 5 lines 46-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 6, 8 and 12-17 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bachmat in view of Eggleston et al. (Eggleston) (WO 97/22936).

Regarding claim 6, Bachmat does not specifically teach means does not accept

request larger than upper limit value.

Eggleston, in the same field of endeavor, teaches means which operates so that

when said upper limit value is set, said means does not process said data input/output

request when said upper limit value has been exceeded (page 6 lines 13-24). It would

have been obvious to one having ordinary skill in the art at the time the invention was

made to have utilized the means of Eggleston in the process of generating accounting

data in Bachmat because it was conventionally employed in the art to allow more

accurate billing control to be achieved.

Regarding claim 8, Bachmat/Eggleston teaches fixed accounting is used for an

accounting subject control unit in which said upper limit value has been set (Eggleston,

page 24 line 12-page 25 line12).

Regarding claim 12, Bachmat teaches a method comprising steps of:

(a) designating accounting subject control units (col. 3 lines 27-33);

(b) for at least some of said accounting subject control units, determining an

upper limit value for a number of times of access per unit time (col. 9 lines 7-10)

wherein access occurs for each of said accounting subject control units (col. 8 lines 32-

36);

(c) generating accounting data of said accounting subject control units in

accordance with said upper limit value (col. 23 lines 38-41);

(d) recording said accounting data (col. 6 lines 45-56),

wherein for each said accounting subject control unit, accounting data is

generated using metered accounting or fixed accounting, depending on whether an

upper limit is defined in said accounting subject control unit for either a number of

accesses per unit time or a quantity of data transferred per unit of time (i.e., defining the

length of an analysis interval and generating, for each subinterval, operational data

including the number of accesses to each logical volume on predetermined ones of

physical disk storage devices in response to data transfer request, col. 4 lines 3-8, col. 6

lines 45-56, col. 8 lines 32-39 and col. 9 lines 1-12).

Bachmat does not explicitly teach upper limit value for a data transfer quantity.

Eggleston, in the same field of endeavor, teaches an upper limit value for a data

transfer quantity (page 25 lines 6-14). It would have been obvious to one having

ordinary skill in the art at the time the invention was made to have utilized the upper limit

value of Eggleston in the process of generating accounting data in Bachmat because it

was conventionally employed in the art to allow more accurate billing control to be

achieved.

Regarding claim 13, Bachmat-Eggleston teaches accounting subject control unit

is a host computer, a World Wide Name, a channel port, or a storage area in a storage

device (Bachmat, col. 5 lines 3-17 and lines 46-51).

Regarding claim 14, Bachmat teaches accounting server is associated with a

service processor for controlling and supervising said storage control device (col. 5 lines

52-67).

Regarding claim 15, Bachmat-Eggleston teaches upper limit value for said

number of times of access (Bachmat, col. 9 lines 7-10) and upper limit value for said

data transfer quantities (Eggleston, page 25 lines 6-14).

Regarding claim 16, Bachmat-Eggleston teaches. generation of said accounting

data is made in accordance with said upper limit values (Eggleston, page 24 lines 12-

14).

Regarding claim 17, Bachmat-Eggleston teaches makes an accounting data

sending request to said storage control device in every predetermined period, and

receives said accounting data in said every predetermined period to record said

accounting data in a database (Bachmat, col. 6 lines 54-56).

3.   Claims 7, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Bachmat in view of Motohashi et al. (Motohashi) (US 5,946,670).

Regarding claim 7, Bachmat does not teach meter accounting is made based on

at least one of said number of times of access and said data transfer quantity.

Motohashi, in the same field of endeavor, teaches meter accounting is used and

is based on at least one of said number of times of access and said data transfer

quantity (col. 1 lines 33-35 and col. 2 lines 40-43). It would have been obvious to have

utilized the meter accounting of Motohashi in the process of generating accounting data

in Bachmat because such meter accounting would enable charge information to be

generated based on the quantity of information transferred, and thereby allowing the

charge to be easily managed (Motohashi, col. 11 lines 41-42).

Regarding claim 9, Bachmat-Motohashi teaches at least one of said accounting server and said service processor has means for fetching said accounting data of said storage control device every predetermined period (Bachmat, col. 7 lines 12-16), and means for calculating rates on the basis of said accounting data fetched by said fetching means and for performing rate management (Motohashi, col. 5 lines 46-51).

Regarding claim 11, Bachmat-Motohashi teaches said storage control device has I/O control portions for setting at least said upper limit values (Bachmat, col. 9 lines 7-12) and generating accounting data in accordance with said upper limit values, and a shared memory for storing said accounting data (Motohashi, page 30 line 4-27).

Response to Arguments

4.   Applicant's arguments filed 10/18/2004 have been fully considered but they are not persuasive.

In the remarks, applicants argued in substance that

(A) Prior Art does not describe or suggest accounting subject control units in which for each such unit, "accounting data is generated using metered accounting or fixed accounting, depending on whether an upper limit is defined for ether a number of accesses per unit time or a quantity of data transferred per unit time".

As to point (A), examiner has given a broadest reasonable interpretation of accounting data in light of specification of the invention (see page 6 lines 25-28) since

accounting data has not been specifically defined in the claimed invention; therefore,

prior art does disclose account subject control units in which for each such unit,

accounting data is generated using metered accounting or fixed accounting, depending

on whether an upper limit is defined for either a number of accesses per unit time or a

quantity of data transferred per unit of time. For example, Bachmat discloses account

subject control units (i.e., physical disk storage devices 31A-31E, Fig. 3) in which for

each such unit, accounting data is generated using metered accounting or fixed

accounting, depending on whether an upper limit is defined for either a number of

accesses per unit time or a quantity of data transferred per unit of time (i.e., defining the

length of an analysis interval and generating, for each subinterval, operational data

including the number of accesses to each logical volume on predetermined ones of

physical disk storage devices in response to data transfer request, col. 4 lines 3-8, col. 6

lines 45-56, col. 8 lines 32-39 and col. 9 lines 1-12).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
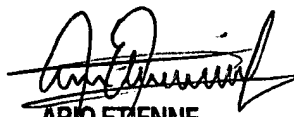
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 8:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.D
May 1, 2005

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